Training Leaders of Cadets – "Leading Cadets" Block (L2)

ADOLESCENT DEVELOPMENT

Scope: During this seminar, students will discuss the stages of psychological development affecting cadets. They will also consider four learning styles and principles of student-centered education as they discuss ways to tailor their mentoring and teaching methods to match cadets' needs as individuals. The seminar's introduction to psychology and educational theory builds a foundation for the "Leading Indirectly" seminar.

Format: Guided Discussion

Duration: 50 minutes

Objectives:
1. Describe the characteristics of early, middle, and late adolescence.
2. Identify and discuss the four modalities of learning.
3. Describe principles of student-centered education as it is applied in the Cadet Program.

Resources: Powerpoint slides; student-centered education hand-out (an annotated instructor's version and a student version are available); note-taker.

STARTING POINT
[Introduce yourself and state the seminar's topic.]

INTRODUCTION
[Have the students take out a sheet of paper.]

Let's play a quick word-association game. I'll give you a word and you will have 10 seconds to write down as many words that come to mind based upon the word that I give. Ready? "Teacher." "Student." "Learning."

OVERVIEW
[Have some students briefly share what they wrote.]

For most of us, we are readily able to come up with word associations for "Teacher" and "Student," but most of us probably paused a little longer when we tried to think of word associations for "Learning."

During this seminar, we will try to un-pause our thinking about learning, especially for our youth, by identifying a few key aspects of psychological development during adolescence. In doing so, we'll consider three basic questions [listed on slide].

MAIN POINT #1: CAP CADETS INCLUDE EARLY, MIDDLE, & LATE ADOLESCENTS

[Guided Discussion. Divide the class into small groups. Give each group 3 minutes to consider their experiences as parents and/or seniors as they list developmental characteristics for the three age groups shown on the slide. Where are kids in these age ranges in their intellectual development? Where are they psychologically? Biologically? Socially? What motivates them? What worries them? Divide the whiteboard into three columns (one for each age group listed on the slide), and make a running list of the students' responses. Keep in mind that the slide and narrative below are not meant to be absolutely definitive – we all know cadets who are "12 going on 20," or "20 but act like they are 12."]

MINI-TRANSITION: It looks like many of you know youth. You have even pointed out some developmental stages that our youth go through. I want to highlight just a few key developmental stages to help further guide our discussion.

COGNITIVE DEVELOPMENT
[Advance the slide so that "concrete thinkers, abstract thinkers & critical thinkers appears.]

Concrete Thinkers: You have concrete thinkers. An example of concrete thought would be a simple math problem (2+2=?). Most pre-teens won't know that there may be alternate solutions; the answer is simply, "4."[1]

Another example would be "Take out the trash." Most 12 year olds know that Dad means that I must take out the trash – pretty concrete.

Abstract Thinkers: You also have abstract thinkers. A mathematical example would be algebra (3x + 4 = 8; what is x?[2]). There is an unknown variable added to the thought. In the trash example, the 15 year old may be thinking, "Dad said that I had to take out the trash, but he didn't say *when*" – this age group tends to add unknown variables, like time.

$$b = \frac{\sum XY - n\overline{XY}}{\sum X^2 - n(\overline{X})^2}$$

$$a = \overline{Y} - b\overline{X}$$

Critical Thinkers. You also have critical thinkers. Our math example this time would be calculus, where it is nothing but variables! For example, think of calculus [ie: the equation in the left margin.] Students who have reached this level of cognition are able to translate unknown variables into possible solutions. In our taking out the trash example, a 19-year-old part-time college student still living at home may be thinking, "Bummer. Dad told me to take out the trash, but I'm waiting for a call, watching TV, listening to my latest MP3 file, and getting ready to go out to the mall with my friends. I wonder what I need to do to get out of taking out the trash?" This age group tends to see the solution as a part of the person's interactions.

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[1] Most preteens do not know mathematical systems other than Base 10. In other systems, the answer could be different.

[2] x = 1 1/3, but that is not important to the discussion.

PHYSIOLOGICAL DEVELOPMENT
[Advance the slide so that "body changes, independence, and adulthood" appears.]

Another way that youth learn is through their physiological changes.

For the 12 – 13 age group, many of these youth are experiencing key body changes (voice changes, puberty, etc.) [Write, "Body Changes," under this age block on the board]. Most youth at this stage are aware of their differences yet many have not yet developed the maturity to handle such differences socially. Performing physical tasks at this age may be awkward as the body changes rapidly.

For the 14 – 16 age group, many of these youth are in true adolescence, complete with the hormonal and mood shifts that this age brings [Write the word, "Adolescence," on the board for this age group]. Most in this age group will have experienced some romantic involvement or desire and are developing their internal sense of identity. Peer influence may influence youth performing physical tasks at this age, as awkwardness reemerges.

For the 17 – 20 age group, most youth at this age are treated as young adults, able to enter into contracts on their own, to marry, and to fight in war [Write the word, "Young Adults," on the board for this age group]. This emergence into adulthood helps to solidify their personal identities and the path that they will follow for some years to come. This age group typically performs physical tasks readily, even to the point of ignoring their physical limitations.

AFFECTIVE DEVELOPMENT
[Advance the slide so that the line with the three "fears" appears.]

A third way that youth learn is through their feelings.

For the 12 – 13 age group, many lack the skills and experiences to answer complex questions. As a result, most in this group fear not knowing, yet are eager to learn [write "Not Knowing" on the board for this age group]. This age group is learning how to respond to the world around them.

For the 14 – 16 age group, most are seeking meaningful relationships. As a result, most in this group fear not relating, but are willing to risk being hurt [write "Not Relating" on the board for this age group]. This age group is learning how to value the world around them.

For the 17 – 20 age group, many are looking towards the future. As a result, some in this group may fear not reaching their goals [write "Not Reaching Goals" on the board]. This age group is learning how to bring together different values.

[Follow-up Questions]

Our discussion so far has shown that CAP cadets span the full range of adolescence. What are some of the practical ramifications of that fact?

Anticipated Responses: Everyone is an individual; as you lead, teach, and mentor cadets, you need to be flexible in your style or approach; recognize that because cadets develop at their own pace, some will struggle with some aspects of CAP (ie: a new 14 year old may worry about fitting-in).

Most squadrons will be comprised of cadets of various ages – middle schoolers, high schoolers, and college students. Is that necessarily bad? As a leader, is there anything you can do to capitalize on the diversity of cadets' ages in your unit?

Anticipated Responses: Use older cadets as role models for younger cadets; when cadets serve as role models, they hold themselves to a higher standard; older cadets can train younger cadets; as trainers / instructors, older cadets will solidify their understanding of the subject matter; etc.

TRANSITION: Just as every cadet is different and is at different stages in their cognitive, physiological, and affective development, every cadet will approach learning in their own way. We'll consider learning styles next.

MAIN POINT #2: EVERYONE LEARNS IN THEIR OWN WAY

[Guided Discussion]

There are many theories about how people learn. Today we'll focus on what educators call the "4 modalities of learning." Simply put, this well-known theory says there are four basic learning styles: visual, auditory, kinesthetic, and tactile.

VISUAL. If someone says they are a "visual" learner, what does that mean? If you're their instructor, what would be some good ways to reach them?

Anticipated Responses: They learn by seeing; they like to study diagrams and look at pictures; they like to put a face to a name; they prefer see an example of the object, vs. talking about it in the abstract; they may dread lectures; needs to "see" what is expected of them; etc.

Can you think of anything in CAP that appeals to the visual learner?

Sample Response: The *CAP Model Rocketry Book* uses photos to show how to build rockets step-by-step

AUDITORY. If someone says they are an "auditory" learner, what does that mean? If you're their instructor, what would be some good ways to reach them?

Anticipated Responses: They learn best by listening; they enjoy listening to group discussions, stories, and personal anecdotes; in math class, they may have enjoyed hearing the multiplication tables recited aloud; they like to give and receive instructions orally; they solve problems best by talking about them; may have an advanced vocabulary; etc.

Can you think of anything in CAP that appeals to the visual learner?

Sample Response: *Flight Time: Values for Living* has cadets work through case studies via guided discussion.

KINESTHETIC. This term comes from an ancient Greek word meaning "to move." If someone is a "kinesthetic" learner, what does that mean? If you're their instructor, what would be some good ways to reach them?

Anticipated Responses: They learn best when they can move around and be active; they find games and role-playing good ways to learn; they prefer lots of opportunities for interaction, and do not find the learning environment effective when they are made to sit still and remain quiet.

Can you think of anything in CAP that appeals to the visual learner?

Sample Response: Drill and ceremonies; obstacle courses

TACTILE. This term comes from a Latin word meaning "to touch." If someone is a "tactile" learner, what does that mean? If you're their instructor, what would be some good ways to reach them?

Anticipated Responses: They learn best by touching; they like to take things apart and put them back together; they learn best by doing; they like to physically interact with their subject matter, by labeling diagrams while reading, or using their fingers to count, for example; etc.

Can you think of anything in CAP that appeals to the tactile learner?

Sample Response: Hands-on projects in the *AEX* program

[Follow-up Question]
We've discussed each of the four types of learning styles, and demonstrated that everyone has their own preferences when it comes to learning. What does this mean for you as a leader of cadets?

Anticipated Responses: Everyone is an individual; as you lead, teach, and mentor cadets, you need to be flexible in your style or approach; in planning meetings and special activities, try to offer something for everyone; recognize that if you fill your meetings with lectures, most cadets will be bored and will not gain anything; etc.

TRANSITION: A common theme in our discussions has been that cadets develop at their own pace and learn in their own way. It's important for us to understand that as mentors and leaders. But although the Cadet Program is educational, it is not meant to be *school*. Next we'll consider how we can help develop cadets without making them feel like their squadron is a boring extension of "first period algebra."
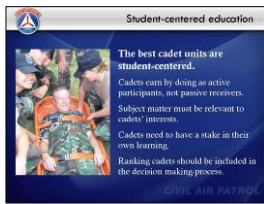
MAIN POINT #3: THE BEST CADET UNITS USE STUDENT-CENTERED EDUCATIONAL APPROACHES

[Guided Discussion]

CAP is an extra-curricular activity, something that should be apart from cadets' formal education, yet compliment it. Cadets say that one aspect of the Cadet Program that really excites them is their having an opportunity to lead the unit, make decisions, and exercise some authority. Educational theorists call such an environment "student-centered."

Principles of Student-Centered Education
The most important characteristic of student-centered (or cadet-centered) education is that the students (cadets) learn by doing. They must be active participants in the educational process, not passive receivers. To make such an environment work, the students (cadets) need to have a stake in their learning, and be allowed to make some decisions about their own learning.

What does that really mean? [Allow time for students to add their own insights.]

Clarifications. Before we take a closer look at how student-centered education relates to the typical CAP squadron, I want to clarify this by briefly explaining what I am *not* talking about. Student-centered education is *not:*

  Subject-centered education: If a teacher says the goal of this class is to get you through *Hamlet*, that's a subject-centered education.

  Task-centered training: If your trainer says today's goal is to train you how to change a flat tire by following 6-steps in sequence, that's task-centered training.

Hand-out. Please refer to the hand-out about student-centered education. In the left column, some educational researchers have described the characteristics of student-centered education. Let's see how those characteristics relate to the CAP Cadet Program by taking them one by one.

[Discuss each characteristic one at a time; refer to the annotated version of the "student-centered education" hand-out for guidance.]

For the visual learners in our audience, take a look at the photo on this slide what do you see? Look closely and you can learn a lot about student-centered education and what cadets love about the Cadet Program.

Anticipated Responses: Cadets are learning how to use a litter. An activity like this involves lots of active, hands-on learning (vs. lectures). By strapping-in their senior leader, the cadets are metaphorically taking charge. Of course, the senior is still "in charge" legally and certainly will continue to be the cadets' adult mentor, but as this photo illustrates, in the Cadet Program, cadets learn to lead by leading.

TRANSITION: Cadets will tell you they enjoy having opportunities to be in charge of their program. Our discussion about student-centered learning has shown there are sound educational reasons to support a squadron making full use of its cadet staff. As our next and final item in this seminar, let's summarize and list some conclusions about today's discussion.

SUMMARY & CONCLUSION

[See slide.]

FINAL THOUGHT

It may take years to see the results, but with your help, the Cadet Program does develop teens into leaders.